

REMARKS

In paragraphs 1-2 of the present Office Action, a restriction requirement is made by the Examiner between Group I comprising Claims 1-6, 11-16 and 21-26, Group II comprising Claims 7-8, 17-18 and 27-28, and Group III comprising Claims 9-10, 19-20 and 29-30. In response, Applicant confirms the provisional election to prosecute the Claims 1-6, 11-16 and 21-26 comprising Group I and has canceled without prejudice the claims in the non-elected groups.

Next, Claims 5, 15 and 25 are objected to based upon a belief "the recited 'a pseudo-random integer value' is not clearly specified in the specification." Applicant respectfully traverses the objection to Claims 5, 15 and 25 because paragraph 173 of the present specification discloses that the mapping function recited in these claims can include "generation of pseudo-random values." Paragraph 170 further teaches that such pseudo-random integer values can be generated utilizing an LFSR counter. In addition, paragraph 177 discloses the use of an LFSR function as the mapping function to generate pseudo-random integer values for an Integer Dial (IDial). In view of the support provided by the present specification for the inventions recited in Claims 5, 15 and 25, Applicant respectfully submits that the objection to these claims is overcome.

At page 3 of the present Office Action, Claims 1-5, 11-15 and 21-25 are rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,618,839 to *Beardslee et al.* (*Beardslee*). That rejection is respectfully traversed, and favorable reconsideration of the claims is requested.

Applicant respectfully submits that exemplary Claim 1 is not rendered unpatentable by *Beardslee* because that reference does not teach or suggest "in the one or more HDL files, including a statement associating the Dial with a mapping function that applies a selected transformation to Dial input values read from or written to said instance of said Dial," as recited in exemplary Claim 1. With reference to this step, page 5 of the present Office Action cites the mapping described at col. 27, lines 57-64 of *Beardslee*.

The cited passage of *Beardslee* discloses:

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Eighth, a DIC register-to-physical mapping module 1718 maps each register configuration and each status register in the DIC into an address space of physical memory in the design to produce the R2P database 614. For example, the physical memory could be implemented as a set of scan-chains, in which case the physical address of a configuration or status register would be given by the index of the scan-chain used and the bit position within the scan-chain. (emphasis supplied)

As disclosed in this passage, the DIC (Design Instrumentation Circuitry) creation processing 1700 shown in Figure 17 of *Beardslee* includes the generation of an R2P (Real-to-Physical) database 614 that maps between the addresses of logical configuration and status registers to physical memory within the DIC. Importantly, in the language of exemplary Claim 1, the address mapping disclosed by *Beardslee* in the foregoing passage does not “appl[y] a selected transformation to values read from or written to” the DIC. Instead, *Beardslee* only discloses mapping of logical register addresses to a physical memory addresses.

Because *Beardslee* does not teach or suggest each feature recited in exemplary Claim 1, and in particular, does not teach or suggest “including a statement associating the Dial with a mapping function that applies a selected transformation to Dial input values read from or written to said instance of said Dial,” Applicant respectfully submits that *Beardslee* does not render exemplary Claim 1, similar Claims 11 and 21, and their respective dependent claims unpatentable under 35 U.S.C. § 102 or § 103.

Applicant further believes that Claims 2-3, 5, 12-13, 15, 22-23 and 25 are not rendered unpatentable by *Beardslee* under 35 U.S.C. § 102 or § 103. At page 5 of the present Office Action, the Examiner rejects these claims under the doctrine of inherency asserting, “*Beardslee* et al. disclose a DIC register to physical mapping module used for mapping which must include a mathematical transformation/shifting value/integer input value/a pseudo-random integer value (col. 27, ll.57-64).” Applicant respectfully traverses the Examiner’s assertion of inherency because *Beardslee*’s disclosure does not require the presence of the claimed elements.

Specifically, *Beardslee* discloses an R2P database 614 that stores a mapping between logical status and configuration registers within the DIC and physical memory locations. As an

example, *Beardslee* discloses at col. 27, lines 60-64 that the physical address for a register could be given by the index and offset (bit position) within the scan chain. *Beardslee* does not teach, suggest or require that such index and offset be determined by a mathematical transformation (Claim 2), shifting a value (Claim 3) or generating a pseudo-random integer value (Claim 5). Consequently, the rejections of Claims 2-3, 5, 12-13, 15, 22-23 and 25 are not well-founded, and Applicant respectfully requests that the rejections of these claims be withdrawn.

Having now responded to each objection and rejection set forth in the present Office Action, Applicant believes all pending claims are now in condition for allowance and respectfully requests such allowance.

No additional fee is believed to be required. If, however, any additional fees are required, please charge those fees to IBM Corporation Deposit Account No. 09-0447.

Respectfully submitted,

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